

ccctgagtga cccacgccgg gagcccatga acatctacaa cctgatcgct atcatccgtg 1980
 accagatcaa gcacctgcag gcagccgtgg accgcaccac ggagctgtca cgccagcgca 2040
 ttgcctctca ggagctgggg cccgccgtgg acaaggacaa ggaagcgctt atggaggaga 2100
 tcttcaagct gaagtcgctg ctccagacca agcgggagca gatcaccacg ctgcgactg 2160
 tgctcaaggc caacaagcag acggccgagg tggcccttgc caacctgaag agcaagtatg 2220
 agaattgaaa ggccatgggtt accgagacca tgatgaagct gcgcaatgag ctcaaggccc 2280
 tcaaggagga cgcagccacc ttctctctgc tgcgtgctat gtttgccacc aggtgtgacg 2340
 agtacattac acagctggat gagatgcagc ggcagctggc ggctgctgag gacgagaaga 2400
 agacgctgaa ctgctgtgct cgcatggcca tcagcagaa gctggcgctg acccagcggc 2460
 tggagctgct cgagctggac catgagcaga cccggcgctg ccgtgccaaa gccgccccga 2520
 agaccaagcc agccacaccg agcctgtaga gtactgtgca ggaggacttg gccacccggc 2580
 cctgtcacac tgcagccctt tccccctccc tctcgtggcc cacaaggagg aaggaagggc 2640
 aacctaaaaa cccacttaga aactttttgg atatgccact gcaattcttt tcaaaatagc 2700
 attccccagg tttttaatgg gaggaaaaaa agcttttaag ttgagcatgc tgcgagctgc 2760
 tgcgtggaaa ggccctctgta tgggcccgaag acccttcttc cctggctgcc aggtctgcca 2820
 ggagcccact ggaaacgccc accacggggg ctcttctgta cacatgttct ttttttatcc 2880
 gatcaacctg tgcacttttg atattttgat attatatttg ctcccttaat tctcgcgta 2940
 gagacggctc caggtgcccgt ggtctatgct cgtggctctg tagctgtccg cctcagctcc 3000
 caccgtgttt gtctgggtgtc agcacgagcg agagctgtgt gctccatagc gtgtagcttt 3060
 agactcggag atgagtgtct tgaccagcg aggagctcag ctaagtgtat ccacgctgtg 3120
 gttcagcagc ctttagatca tacggcattg tggttcatgt ttgaaattac agatttttaa 3180
 tgccatgttc attaagaaat ccagggtatt cagattctgg ggtttttcat attgtattat 3240
 tattattctt aggaatagtt caatgtaaca agaagaaaac ttgacctttg ctctgggttaa 3300
 aacagtaata ggcacttgaa aaaaaaagat aaattattga atgagtagta ttacctacaa 3360
 attccagaat tttctgggtt ttaggacgtt gtgaagcatg actgattaac agaattttat 3420
 acaactgtac caataaaaatt ccaaattgga attgttttgt tactctggtt gttgtgcca 3480
 attgtggtac acttagaaaa ttctacagtc gtcgattttt aggggtgtct ctttcaacac 3540
 ctttttgtaa gtaatcattg ccagtagtgc cttcatcagt taaggagagt gtcccagcac 3600
 agatcattct caaaagcgag cagggaagag ctagtgggca tgctgaaggc cagcgtggac 3660
 agcaggtgag gcaggtgtct ctcacacca gacctgggca tcttcattga gggaaagaaa 3720
 acagtcattg tgcaaaattc tgtagtcag tgattcttta cttgcaaatt caggggctta 3780
 gaaaatgaaa gcaaacacaa aaccttgagt gtgctttggg aaccaaatgg accttctggg 3840
 acaagctgag caagctgtat gaacgccacg tttgtgaaga gctgagggtg tcaggagggc 3900
 cgacgctgtg ttggcatgcg cagtagggga tgagggttag ccatagtatt ctttgcaaat 3960
 gtgaaagcga gacattatat ctctctctgc ttggtgtaac taatcactgt taatttcagg 4020
 aaacagaact cattaaaact ccttagcaaa ccaggtctac atcctgtttt gtttgctgag 4080
 tgaggttagt gggagtggtc aaattggtac tcttgaggga agaaaaactg tcttctcttc 4140
 tccaaaaaag gaaaaattat aataatataa atgacaaaaa taaaagaatt ctgtttctctg 4200
 gaataagcat ttcttattcc tagttgtagg gactcctatt ttaccttcc gttacagtgt 4260
 tgattcataa gaaatattgt tacatttgag ataacttcat ctgtatgggg tattttattg 4320
 caatgatgtc tgagtactgt attttttctg tgcattacct tagtgtcaga atgttgggtc 4380
 ttatttttaa gtcatatgca tgttctctct ccaaggaacc ttacacaga cccaaacaaa 4440
 aaaataataa tcaaatgcct tcaatttctg agaaaatgag gcagagcatg gaaaagggaat 4500
 aggaaggaga aattaattga gattttcagg acacagacat atgatgtgaa tgcctacaaa 4560
 gccagtgtgc ataggaacag tgggcctggg taaagagtca cattggtagg 4610

<210> 2

<211> 824

<212> PRT

<213> Homo sapiens

<400> 2

Met Ser Ala Pro Ser Glu Glu Glu Glu Tyr Ala Arg Leu Val Met Glu
 1 5 10 15

Ala Gln Pro Glu Trp Leu Arg Ala Glu Val Lys Arg Leu Ser His Glu
 20 25 30

Leu Ala Glu Thr Thr Arg Glu Lys Ile Gln Ala Ala Glu Tyr Gly Leu
 35 40 45

Ala Val Leu Glu Glu Lys His Gln Leu Lys Leu Gln Phe Glu Glu Leu
50 55 60

Glu Val Asp Tyr Glu Ala Ile Arg Ser Glu Met Glu Gln Leu Lys Glu
65 70 75 80

Ala Phe Gly Gln Ala His Thr Asn His Lys Lys Val Ala Ala Asp Gly
85 90 95

Glu Ser Arg Glu Glu Ser Leu Ile Gln Glu Ser Ala Ser Lys Glu Gln
100 105 110

Tyr Tyr Val Arg Lys Val Leu Glu Leu Gln Thr Glu Leu Lys Gln Leu
115 120 125

Arg Asn Val Leu Thr Asn Thr Gln Ser Glu Asn Glu Arg Leu Ala Ser
130 135 140

Val Ala Gln Glu Leu Lys Glu Ile Asn Gln Asn Val Glu Ile Gln Arg
145 150 155 160

Gly Arg Leu Arg Asp Asp Ile Lys Glu Tyr Lys Phe Arg Glu Ala Arg
165 170 175

Leu Leu Gln Asp Tyr Ser Glu Leu Glu Glu Asn Ile Ser Leu Gln
180 185 190

Lys Gln Val Ser Val Leu Arg Gln Asn Gln Val Glu Phe Glu Gly Leu
195 200 205

Lys His Glu Ile Lys Arg Leu Glu Glu Glu Thr Glu Tyr Leu Asn Ser
210 215 220

Gln Leu Glu Asp Ala Ile Arg Leu Lys Glu Ile Ser Glu Arg Gln Leu
225 230 235 240

Glu Glu Ala Leu Glu Thr Leu Lys Thr Glu Arg Glu Gln Lys Asn Ser
245 250 255

Leu Arg Lys Glu Leu Ser His Tyr Met Ser Ile Asn Asp Ser Phe Tyr
260 265 270

Thr Ser His Leu His Val Ser Leu Asp Gly Leu Lys Phe Ser Asp Asp
275 280 285

Ala Ala Glu Pro Asn Asn Asp Ala Glu Ala Leu Val Asn Gly Phe Glu
290 295 300

His Gly Gly Leu Ala Lys Leu Pro Leu Asp Asn Lys Thr Ser Thr Pro
305 310 315 320

Lys Lys Glu Gly Leu Ala Pro Pro Ser Pro Ser Leu Val Ser Asp Leu
325 330 335

Leu Ser Glu Leu Asn Ile Ser Glu Ile Gln Lys Leu Lys Gln Gln Leu
340 345 350

Met Gln Met Glu Arg Glu Lys Ala Gly Leu Leu Ala Thr Leu Gln Asp
355 360 365

Thr Gln Lys Gln Leu Glu His Thr Arg Gly Ser Leu Ser Glu Gln Gln

370	375	380
Glu Lys Val Thr Arg Leu Thr Glu Asn Leu Ser Ala Leu Arg Arg Leu 385 390 395 400		
Gln Ala Ser Lys Glu Arg Gln Thr Ala Leu Asp Asn Glu Lys Asp Arg 405 410 415		
Asp Ser His Glu Asp Gly Asp Tyr Tyr Glu Val Asp Ile Asn Gly Pro 420 425 430		
Glu Ile Leu Ala Cys Lys Tyr His Val Ala Val Ala Glu Ala Gly Glu 435 440 445		
Leu Arg Glu Gln Leu Lys Ala Leu Arg Ser Thr His Glu Ala Arg Glu 450 455 460		
Ala Gln His Ala Glu Glu Lys Gly Arg Tyr Glu Ala Glu Gly Gln Ala 465 470 475 480		
Leu Thr Glu Lys Val Ser Leu Leu Glu Lys Ala Ser Arg Gln Asp Arg 485 490 495		
Glu Leu Leu Ala Arg Leu Glu Lys Glu Leu Lys Lys Val Ser Asp Val 500 505 510		
Ala Gly Glu Thr Gln Gly Ser Leu Ser Val Ala Gln Asp Glu Leu Val 515 520 525		
Thr Phe Ser Glu Glu Leu Ala Asn Leu Tyr His His Val Cys Met Cys 530 535 540		
Asn Asn Glu Thr Pro Asn Arg Val Met Leu Asp Tyr Tyr Arg Glu Gly 545 550 555 560		
Gln Gly Gly Ala Gly Arg Thr Ser Pro Gly Gly Arg Thr Ser Pro Glu 565 570 575		
Ala Arg Gly Arg Arg Ser Pro Ile Leu Leu Pro Lys Gly Leu Leu Ala 580 585 590		
Pro Glu Ala Gly Arg Ala Asp Gly Gly Thr Gly Asp Ser Ser Pro Ser 595 600 605		
Pro Gly Ser Ser Leu Pro Ser Pro Leu Ser Asp Pro Arg Arg Glu Pro 610 615 620		
Met Asn Ile Tyr Asn Leu Ile Ala Ile Ile Arg Asp Gln Ile Lys His 625 630 635 640		
Leu Gln Ala Ala Val Asp Arg Thr Thr Glu Leu Ser Arg Gln Arg Ile 645 650 655		
Ala Ser Gln Glu Leu Gly Pro Ala Val Asp Lys Asp Lys Glu Ala Leu 660 665 670		
Met Glu Glu Ile Leu Lys Leu Lys Ser Leu Leu Ser Thr Lys Arg Glu 675 680 685		
Gln Ile Thr Thr Leu Arg Thr Val Leu Lys Ala Asn Lys Gln Thr Ala 690 695 700		

Glu Val Ala Leu Ala Asn Leu Lys Ser Lys Tyr Glu Asn Glu Lys Ala
705 710 715 720

Met Val Thr Glu Thr Met Met Lys Leu Arg Asn Glu Leu Lys Ala Leu
725 730 735

Lys Glu Asp Ala Ala Thr Phe Ser Ser Leu Arg Ala Met Phe Ala Thr
740 745 750

Arg Cys Asp Glu Tyr Ile Thr Gln Leu Asp Glu Met Gln Arg Gln Leu
755 760 765

Ala Ala Ala Glu Asp Glu Lys Lys Thr Leu Asn Ser Leu Leu Arg Met
770 775 780

Ala Ile Gln Gln Lys Leu Ala Leu Thr Gln Arg Leu Glu Leu Leu Glu
785 790 795 800

Leu Asp His Glu Gln Thr Arg Arg Gly Arg Ala Lys Ala Ala Pro Lys
805 810 815

Thr Lys Pro Ala Thr Pro Ser Leu
820

<210> 3

<211> 2940

<212> DNA

<213> Homo sapiens

<400> 3

atgtcgggtgc	tgggcgagta	cgagcgacac	tgcgattcca	tcaactcgga	ctttggggagc	60
gagtcggggg	gttgcgggga	ctcgagtcgg	gggcctagcg	ccagtcaggg	gccgcgagcc	120
ggcggcgggc	cggcgggagca	ggaggaactg	cactacatcc	ccatccgcgt	cctggggccgc	180
ggcgcccttc	gggaagccac	gctgtaccgc	cgcaccgagg	atgactcact	ggttgtgtgtg	240
aaggaagtgc	atttgaccgc	gctgtctgag	aaggaacgtc	gtgatgcctt	gaatgagatt	300
gttattcttg	cactgctgca	gcatgacaac	attattgcct	actacaatca	cttcatggac	360
aataccacgc	tgctgattga	gctggaatat	tgtaatggag	ggaacctgta	tgacaaaaatc	420
cttcgtcaga	aggacaagtt	gtttgaggaa	gagatgggtg	tgtggtacct	atttcagatt	480
gtttcagcag	tgagctgcat	ccataaagct	ggaatccttc	atagagatat	aaagacatta	540
aataatttttc	tgaccaaggc	aaacctgata	aaacttggag	attatggcct	agcaaagaaa	600
cttaattctg	agtattccat	ggctgagacg	cttgtgggaa	ccccatatta	catgtctcca	660
gagctctgtc	aaggagtaaa	gtacaatttc	aagcttgata	tctgggcagt	tggctgcgtc	720
atttttgaac	tgcttacctt	aaagaggacg	tttgatgcta	caaaccct	taacctgtgt	780
gtgaagatcg	tgcaaggaat	tcgggccatg	gaagttagct	ctagccagta	ctctttggaa	840
ttgatccaaa	tggttcattc	gtgccttgac	caggatcctg	agcagagacc	tactgcagat	900
gaacttctag	atcgccctct	tctcaggaaa	cgcaggagag	agatggagga	aaaagtcact	960
ctgcttaatg	cacctacaaa	gagaccaagg	tcaagcactg	tgactgaagc	acccattgct	1020
gtagtaacat	cacgaaccag	tgaagtctat	gtttggggtg	gtggaaaatc	cacccccag	1080
aaactggatg	ttatcaagag	tggctgtagt	gcccggcagg	tctgtgcagg	gaataccac	1140
tttgctgtgg	tcacagtggg	gaaggaactg	tacacttggg	tgaacatgca	aggaggcact	1200
aaactccatg	gtcagctggg	ccatggagac	aaagcctcct	atcgacagcc	aaagcatgtg	1260
gaaaagttgc	aaggcaaagc	tatccatcag	gtgtcatgtg	gtgatgattt	cactgtctgt	1320
gtgactgatg	agggtcagct	ctatgccttc	ggatcagatt	attatggctg	catgggggtg	1380
gacaaagttg	ctggccctga	agtgctagaa	cccattgcagc	tgaacttctt	cctcagcaat	1440
ccagtggagc	aggctctcctg	tggagataat	catgtggtgg	ttctgacacg	aaacaaggaa	1500
gtctattctt	ggggctgtgg	cgaatatgga	cgactgggtt	tggattcaga	agaggattat	1560
tatacaccac	aaaaggtgga	tgttcccaag	gccttgatta	ttgttgcagt	tcaatgtggc	1620
tgtgatggga	catttctgtt	gacccagtcg	ggcaaagtgc	tggcctgtgg	actcaatgaa	1680
ttcaataagc	tgggtctgaa	tcagtgcattg	tcgggaatta	tcaaccatga	agcataccat	1740

```

gaagttccct acacaacgtc ctttaccttg gccaaacagt tgtcctttta taagatccgt 1800
accattgccc caggcaagac tcacacagct gctattgatg agcgaggccg gctgctgacc 1860
tttggctgca acaagtgtgg gcagctgggc gttgggaact acaagaagcg tctgggaatc 1920
aacctgttgg ggggacccct tgggtgggaag caagtgatca ggggtctcctg cggatgatgag 1980
tttaccattg ctgccactga tgataatcac atttttgcct ggggcaatgg tggtaatggc 2040
cgcttgcaa tgacccccac agagagacca catggctctg atatctgtac ctcatggcct 2100
cggcctatct ttggatctct gcatcatgtc cgggacctgt cttgccgtgg atggcatacc 2160
attctcatcg ttgagaaaagt attgaattct aagaccatcc gttccaatag cagtggctta 2220
tccattggaa ctgtgtttca gagctctagc cggggaggag gcggcggggg cggcgggtgg 2280
gaagaagagg acagtcagca ggaatctgaa actcctgacc caagtggagg cttccgagga 2340
acaatggaag cagaccgagg aatggaagg ttaatcagtc ccacagaggc catggggaac 2400
agtaattggg ccagcagctc ctgtcctggc tggcttcgaa aggagctgga aaatgcagaa 2460
tttatcccca tgctgacag cccatctcct ctcatgtcag cgttttcaga atctgagaaa 2520
gataccctgc cctatgaaga gctgcaagga ctcaaagtgg cctctgaagc tcctttggaa 2580
cacaaacccc aagtagaagc ctgctcacct cggctgaatc ctgcagtaac ctgtgctggg 2640
aagggaacac cactgactcc tctgctgtgt gctgagcag ctctgcaggt ggaggttgag 2700
agattgcagg gtctggtgtt aaagtgtctg gctgaacaac agaagctaca gcaagaaaac 2760
ctccagattt ttacccaact gcagaagttg aacaagaaat tagaaggagg gcagcaggtg 2820
gggatgcatt ccaaaggaac tcagacagca aaggaagaga tggaaatgga tccaaagcct 2880
gacttagatt cagattcctg gtgctcctg ggaacagact cctgtagacc cagcctctag 2940

```

<210> 4
 <211> 979
 <212> PRT
 <213> Homo sapiens

```

<400> 4
Met Ser Val Leu Gly Glu Tyr Glu Arg His Cys Asp Ser Ile Asn Ser
  1             5             10             15

Asp Phe Gly Ser Glu Ser Gly Gly Cys Gly Asp Ser Ser Pro Gly Pro
      20             25             30

Ser Ala Ser Gln Gly Pro Arg Ala Gly Gly Gly Ala Ala Glu Gln Glu
      35             40             45

Glu Leu His Tyr Ile Pro Ile Arg Val Leu Gly Arg Gly Ala Phe Gly
      50             55             60

Glu Ala Thr Leu Tyr Arg Arg Thr Glu Asp Asp Ser Leu Val Val Trp
      65             70             75             80

Lys Glu Val Asp Leu Thr Arg Leu Ser Glu Lys Glu Arg Arg Asp Ala
      85             90             95

Leu Asn Glu Ile Val Ile Leu Ala Leu Leu Gln His Asp Asn Ile Ile
      100            105            110

Ala Tyr Tyr Asn His Phe Met Asp Asn Thr Thr Leu Leu Ile Glu Leu
      115            120            125

Glu Tyr Cys Asn Gly Gly Asn Leu Tyr Asp Lys Ile Leu Arg Gln Lys
      130            135            140

Asp Lys Leu Phe Glu Glu Glu Met Val Val Trp Tyr Leu Phe Gln Ile
      145            150            155            160

Val Ser Ala Val Ser Cys Ile His Lys Ala Gly Ile Leu His Arg Asp
      165            170            175

Ile Lys Thr Leu Asn Ile Phe Leu Thr Lys Ala Asn Leu Ile Lys Leu

```

7

Gly Leu Asp Ser Glu Glu Asp Tyr Tyr Thr Pro Gln Lys Val Asp Val
515 520 525

Pro Lys Ala Leu Ile Ile Val Ala Val Gln Cys Gly Cys Asp Gly Thr
530 535 540

Phe Leu Leu Thr Gln Ser Gly Lys Val Leu Ala Cys Gly Leu Asn Glu
545 550 555 560

Phe Asn Lys Leu Gly Leu Asn Gln Cys Met Ser Gly Ile Ile Asn His
565 570 575

Glu Ala Tyr His Glu Val Pro Tyr Thr Thr Ser Phe Thr Leu Ala Lys
580 585 590

Gln Leu Ser Phe Tyr Lys Ile Arg Thr Ile Ala Pro Gly Lys Thr His
595 600 605

Thr Ala Ala Ile Asp Glu Arg Gly Arg Leu Leu Thr Phe Gly Cys Asn
610 615 620

Lys Cys Gly Gln Leu Gly Val Gly Asn Tyr Lys Lys Arg Leu Gly Ile
625 630 635 640

Asn Leu Leu Gly Gly Pro Leu Gly Gly Lys Gln Val Ile Arg Val Ser
645 650 655

Cys Gly Asp Glu Phe Thr Ile Ala Ala Thr Asp Asp Asn His Ile Phe
660 665 670

Ala Trp Gly Asn Gly Gly Asn Gly Arg Leu Ala Met Thr Pro Thr Glu
675 680 685

Arg Pro His Gly Ser Asp Ile Cys Thr Ser Trp Pro Arg Pro Ile Phe
690 695 700

Gly Ser Leu His His Val Pro Asp Leu Ser Cys Arg Gly Trp His Thr
705 710 715 720

Ile Leu Ile Val Glu Lys Val Leu Asn Ser Lys Thr Ile Arg Ser Asn
725 730 735

Ser Ser Gly Leu Ser Ile Gly Thr Val Phe Gln Ser Ser Ser Pro Gly
740 745 750

Gly Gly Gly Gly Gly Gly Gly Gly Glu Glu Glu Asp Ser Gln Gln Glu
755 760 765

Ser Glu Thr Pro Asp Pro Ser Gly Gly Phe Arg Gly Thr Met Glu Ala
770 775 780

Asp Arg Gly Met Glu Gly Leu Ile Ser Pro Thr Glu Ala Met Gly Asn
785 790 795 800

Ser Asn Gly Ala Ser Ser Ser Cys Pro Gly Trp Leu Arg Lys Glu Leu
805 810 815

Glu Asn Ala Glu Phe Ile Pro Met Pro Asp Ser Pro Ser Pro Leu Ser
820 825 830

Ala Ala Phe Ser Glu Ser Glu Lys Asp Thr Leu Pro Tyr Glu Glu Leu
835 840 845

Gln Gly Leu Lys Val Ala Ser Glu Ala Pro Leu Glu His Lys Pro Gln
850 855 860

Val Glu Ala Ser Ser Pro Arg Leu Asn Pro Ala Val Thr Cys Ala Gly
865 870 875 880

Lys Gly Thr Pro Leu Thr Pro Pro Ala Cys Ala Cys Ser Ser Leu Gln
885 890 895

Val Glu Val Glu Arg Leu Gln Gly Leu Val Leu Lys Cys Leu Ala Glu
900 905 910

Gln Gln Lys Leu Gln Gln Glu Asn Leu Gln Ile Phe Thr Gln Leu Gln
915 920 925

Lys Leu Asn Lys Lys Leu Glu Gly Gly Gln Gln Val Gly Met His Ser
930 935 940

Lys Gly Thr Gln Thr Ala Lys Glu Glu Met Glu Met Asp Pro Lys Pro
945 950 955 960

Asp Leu Asp Ser Asp Ser Trp Cys Leu Leu Gly Thr Asp Ser Cys Arg
965 970 975

Pro Ser Leu

<210> 5
<211> 21
<212> DNA
<213> Mus sp.

<400> 5
ccggtggatg tggaatgtgt g 21

<210> 6
<211> 22
<212> DNA
<213> Mus sp.

<400> 6
caaagccaag gttcattcgg tg 22

<210> 7
<211> 22
<212> DNA
<213> Mus sp.

<400> 7
gccctgaatg aactgcagga cg 22

<210> 8
<211> 22
<212> DNA
<213> Mus sp.

<400> 8

cacgggtagc caacgctatg tc

22

<210> 9
<211> 21
<212> DNA
<213> Mus sp.

<400> 9
cttccgcttc cacgacactc g

21

<210> 10
<211> 21
<212> DNA
<213> Mus sp.

<400> 10
ctcaatggcc tcagacgcc g

21

<210> 11
<211> 20
<212> DNA
<213> Homo sapiens

<400> 11
gcctttggac aagcacacac

20

<210> 12
<211> 19
<212> DNA
<213> Homo sapiens

<400> 12
ctccttcagc tcctggggcc

19

<210> 13
<211> 30
<212> DNA
<213> Homo sapiens

<400> 13
cgagctgctc tatagactgc tgggtagtcc

30

<210> 14
<211> 30
<212> DNA
<213> Homo sapiens

<400> 14
taacagaggt ggcttatgag tatttcttcc

30

<210> 15
<211> 20
<212> DNA
<213> Homo sapiens

<400> 15
aaaccacaag aaggtggctg

20

<210> 16
<211> 22
<212> DNA

<213> Homo sapiens

<400> 16

aggtgaagcg gctgtccac ga

22

<210> 17

<211> 22

<212> DNA

<213> Homo sapiens

<400> 17

ctccttcagc tcctgggcca ca

22

<210> 18

<211> 821

<212> PRT

<213> Homo sapiens

<400> 18

Met	Ala	Ala	Glu	Glu	Val	Leu	Gln	Thr	Val	Asp	His	Tyr	Lys	Thr	Glu
1				5					10					15	

Ile	Glu	Arg	Leu	Thr	Lys	Glu	Leu	Thr	Glu	Thr	Thr	His	Glu	Lys	Ile
			20					25					30		

Gln	Ala	Ala	Glu	Tyr	Gly	Leu	Val	Val	Leu	Glu	Glu	Lys	Leu	Thr	Leu
		35					40					45			

Lys	Gln	Gln	Tyr	Asp	Glu	Leu	Glu	Ala	Glu	Tyr	Asp	Ser	Leu	Lys	Gln
	50					55					60				

Glu	Leu	Glu	Gln	Leu	Lys	Glu	Ala	Phe	Gly	Gln	Ser	Phe	Ser	Ile	His
65					70					75					80

Arg	Lys	Val	Ala	Glu	Asp	Gly	Glu	Thr	Arg	Glu	Glu	Thr	Leu	Leu	Gln
				85					90					95	

Glu	Ser	Ala	Ser	Lys	Glu	Ala	Tyr	Tyr	Leu	Gly	Lys	Ile	Leu	Glu	Met
			100					105					110		

Gln	Asn	Glu	Leu	Lys	Gln	Ser	Arg	Ala	Val	Val	Thr	Asn	Val	Gln	Ala
		115					120					125			

Glu	Asn	Glu	Arg	Leu	Thr	Ala	Val	Val	Gln	Asp	Leu	Lys	Glu	Asn	Asn
	130					135					140				

Glu	Met	Val	Glu	Leu	Gln	Arg	Ile	Arg	Met	Lys	Asp	Glu	Ile	Arg	Glu
145					150					155					160

Tyr	Lys	Phe	Arg	Glu	Ala	Arg	Leu	Leu	Gln	Asp	Tyr	Thr	Glu	Leu	Glu
			165						170					175	

Glu	Glu	Asn	Ile	Thr	Leu	Gln	Lys	Leu	Val	Ser	Thr	Leu	Lys	Gln	Asn
			180					185					190		

Gln	Val	Glu	Tyr	Glu	Gly	Leu	Lys	His	Glu	Ile	Lys	Arg	Phe	Glu	Glu
		195					200					205			

Glu	Thr	Val	Leu	Leu	Asn	Ser	Gln	Leu	Glu	Asp	Ala	Ile	Arg	Leu	Lys
	210					215					220				

Glu Ile Ala Glu His Gln Leu Glu Glu Ala Leu Glu Thr Leu Lys Asn
225 230 235 240

Glu Arg Glu Gln Lys Asn Asn Leu Arg Lys Glu Leu Ser Gln Tyr Ile
245 250 255

Ser Leu Asn Asp Asn His Ile Ser Ile Ser Val Asp Gly Leu Lys Phe
260 265 270

Ala Glu Asp Gly Ser Glu Pro Asn Asn Asp Asp Lys Met Asn Gly His
275 280 285

Ile His Gly Pro Leu Val Lys Leu Asn Gly Asp Tyr Arg Thr Pro Thr
290 295 300

Leu Arg Lys Gly Glu Ser Leu Asn Pro Val Ser Asp Leu Phe Ser Glu
305 310 315 320

Leu Asn Ile Ser Glu Ile Gln Lys Leu Lys Gln Gln Leu Met Gln Val
325 330 335

Glu Arg Glu Lys Ala Ile Leu Leu Ala Asn Leu Gln Glu Ser Gln Thr
340 345 350

Gln Leu Glu His Thr Lys Gly Ala Leu Thr Glu Gln His Glu Arg Val
355 360 365

His Arg Leu Thr Glu His Val Asn Ala Met Arg Gly Leu Gln Ser Ser
370 375 380

Lys Glu Leu Lys Ala Glu Leu Asp Gly Glu Lys Gly Arg Asp Ser Gly
385 390 395 400

Glu Glu Ala His Asp Tyr Glu Val Asp Ile Asn Gly Leu Glu Ile Leu
405 410 415

Glu Cys Lys Tyr Arg Val Ala Val Thr Glu Val Ile Asp Leu Lys Ala
420 425 430

Glu Ile Lys Ala Leu Lys Glu Lys Tyr Asn Lys Ser Val Glu Asn Tyr
435 440 445

Thr Asp Glu Lys Ala Lys Tyr Glu Ser Lys Ile Gln Met Tyr Asp Glu
450 455 460

Gln Val Thr Ser Leu Glu Lys Thr Thr Lys Glu Ser Gly Glu Lys Met
465 470 475 480

Ala His Met Glu Lys Glu Leu Gln Lys Met Thr Ser Ile Ala Asn Glu
485 490 495

Asn His Ser Thr Leu Asn Thr Ala Gln Asp Glu Leu Val Thr Phe Ser
500 505 510

Glu Glu Leu Ala Gln Leu Tyr His His Val Cys Leu Cys Asn Asn Glu
515 520 525

Thr Pro Asn Arg Val Met Leu Asp Tyr Tyr Arg Gln Ser Arg Val Thr
530 535 540

Arg Ser Gly Ser Leu Lys Gly Pro Asp Asp Pro Arg Gly Leu Leu Ser

545 550 555 560
 Pro Arg Leu Ala Arg Arg Gly Val Ser Ser Pro Val Glu Thr Arg Thr
 565 570 575
 Ser Ser Glu Pro Val Ala Lys Glu Ser Thr Glu Pro Ser Lys Glu Pro
 580 585 590
 Ser Pro Thr Lys Thr Pro Thr Ile Ser Pro Val Ile Thr Ala Pro Pro
 595 600 605
 Ser Ser Pro Val Leu Asp Thr Ser Asp Ile Arg Lys Glu Pro Met Asn
 610 615 620
 Ile Tyr Asn Leu Asn Ala Ile Ile Arg Asp Gln Ile Lys His Leu Gln
 625 630 635 640
 Lys Ala Val Asp Arg Ser Leu Gln Leu Ser Arg Gln Arg Ala Ala Ala
 645 650 655
 Arg Glu Leu Ala Pro Met Ile Asp Lys Asp Lys Glu Ala Leu Met Glu
 660 665 670
 Glu Ile Leu Lys Leu Lys Ser Leu Leu Ser Thr Lys Arg Glu Gln Ile
 675 680 685
 Ala Thr Leu Arg Ala Val Leu Lys Ala Asn Lys Gln Thr Ala Glu Val
 690 695 700
 Ala Leu Ala Asn Leu Lys Asn Lys Tyr Glu Asn Glu Lys Ala Met Val
 705 710 715 720
 Thr Glu Thr Met Thr Lys Leu Arg Asn Glu Leu Lys Ala Leu Lys Glu
 725 730 735
 Asp Ala Ala Thr Phe Ser Ser Leu Arg Thr Met Phe Ala Thr Arg Cys
 740 745 750
 Asp Glu Tyr Val Thr Gln Leu Asp Glu Met Gln Arg Gln Leu Ala Ala
 755 760 765
 Ala Glu Asp Glu Lys Lys Thr Leu Asn Thr Leu Leu Arg Met Ala Ile
 770 775 780
 Gln Gln Lys Leu Ala Leu Thr Gln Arg Leu Glu Asp Leu Glu Phe Asp
 785 790 795 800
 His Glu Gln Ser Arg Arg Ser Lys Gly Lys Leu Gly Lys Ser Lys Ile
 805 810 815
 Gly Ser Pro Lys Val
 820

<210> 19

<211> 868

<212> PRT

<213> Homo sapiens

<400> 19

Asn Thr His Leu Glu Ala Gln Leu Gln Lys Ala Glu Glu Ala Gly Ala

14

Glu Ser Ser Ser Leu Leu Gln Asp Lys Met Asp Leu Gln Lys Gln Val
 340 345 350
 Glu Asp Leu Lys Ser Gln Leu Val Ala Gln Asp Asp Ser Gln Arg Leu
 355 360 365
 Val Glu Gln Glu Val Gln Glu Lys Leu Arg Glu Thr Gln Glu Tyr Asn
 370 375 380
 Arg Ile Gln Lys Glu Leu Glu Arg Glu Lys Ala Ser Leu Thr Leu Ser
 385 390 395 400
 Leu Met Glu Lys Glu Gln Arg Leu Leu Val Leu Gln Glu Ala Asp Ser
 405 410 415
 Ile Arg Gln Gln Glu Leu Ser Ala Leu Arg Gln Asp Met Gln Glu Ala
 420 425 430
 Gln Gly Glu Gln Lys Glu Leu Ser Ala Gln Met Glu Leu Leu Arg Gln
 435 440 445
 Glu Val Lys Glu Lys Glu Ala Asp Phe Leu Ala Gln Glu Ala Gln Leu
 450 455 460
 Leu Glu Glu Leu Glu Ala Ser His Ile Thr Glu Gln Gln Leu Arg Ala
 465 470 475 480
 Ser Leu Trp Ala Gln Glu Ala Lys Ala Ala Gln Leu Gln Leu Arg Leu
 485 490 495
 Arg Ser Thr Glu Ser Gln Leu Glu Ala Leu Ala Ala Glu Gln Gln Pro
 500 505 510
 Gly Asn Gln Ala Gln Ala Gln Ala Gln Leu Ala Ser Leu Tyr Ser Ala
 515 520 525
 Leu Gln Gln Ala Leu Gly Ser Val Cys Glu Ser Arg Pro Glu Leu Ser
 530 535 540
 Gly Gly Gly Asp Ser Ala Pro Ser Val Trp Gly Leu Glu Pro Asp Gln
 545 550 555 560
 Asn Gly Ala Arg Ser Leu Phe Lys Arg Gly Pro Leu Leu Thr Ala Leu
 565 570 575
 Ser Ala Glu Ala Val Ala Ser Ala Leu His Lys Leu His Gln Asp Leu
 580 585 590
 Trp Lys Thr Gln Gln Thr Arg Asp Val Leu Arg Asp Gln Val Gln Lys
 595 600 605
 Leu Glu Glu Arg Leu Thr Asp Thr Glu Ala Glu Lys Ser Gln Val His
 610 615 620
 Thr Glu Leu Gln Asp Leu Gln Arg Gln Leu Ser Gln Asn Gln Glu Glu
 625 630 635 640
 Lys Ser Lys Trp Glu Gly Lys Gln Asn Ser Leu Glu Ser Glu Leu Met
 645 650 655

Glu Leu His Glu Thr Met Ala Ser Leu Gln Ser Arg Leu Arg Arg Ala
660 665 670

Glu Leu Gln Arg Met Glu Ala Gln Gly Glu Arg Glu Leu Leu Gln Ala
675 680 685

Ala Lys Glu Asn Leu Thr Ala Gln Val Glu His Leu Gln Ala Ala Val
690 695 700

Val Glu Ala Arg Ala Gln Ala Ser Ala Ala Gly Ile Leu Glu Glu Asp
705 710 715 720

Leu Arg Thr Ala Arg Ser Ala Leu Lys Leu Lys Asn Glu Glu Val Glu
725 730 735

Ser Glu Arg Glu Arg Ala Gln Ala Leu Gln Glu Gln Gly Glu Leu Lys
740 745 750

Val Ala Gln Gly Lys Ala Leu Gln Glu Asn Leu Ala Leu Leu Thr Gln
755 760 765

Thr Leu Ala Glu Arg Glu Glu Glu Val Glu Thr Leu Arg Gly Gln Ile
770 775 780

Gln Glu Leu Glu Lys Gln Arg Glu Met Gln Lys Ala Ala Leu Glu Leu
785 790 795 800

Leu Ser Leu Asp Leu Lys Lys Arg Asn Gln Glu Val Asp Leu Gln Gln
805 810 815

Glu Gln Ile Gln Glu Leu Glu Lys Cys Arg Ser Val Leu Glu His Leu
820 825 830

Pro Met Ala Val Gln Glu Arg Glu Gln Lys Leu Thr Val Gln Arg Glu
835 840 845

Gln Ile Arg Glu Leu Glu Lys Asp Arg Glu Thr Gln Arg Asn Val Leu
850 855 860

Glu His Gln Leu
865